

SIMS

Shellfish Information Management System

NOAA
National Ocean Service
National Centers for Coastal Ocean Science
Center for Coastal Environmental Health
and Biomolecular Research

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Background

- FDA, NOAA: Shellfish Register
 - Classified acreages, supporting info
 - ~5 year retrospective report
- Last Register in 1997
 - classified area/acreage, point/nps factors, restoration potential, relative resource abundance
And digitized shellfish classified areas.
- More utility nationally, less at state level

A Look to the Future

- Technology = accessible data system
- ISSC Steering Committee
- Prospectus : "...use computer technology to improve states' capability to manage shellfish safety and resources."
- Support by ISSC Membership

Approach

■ System Attributes

- more current data
- GIS / spatial /visual /mapping
- tools and functions useful to the states
- assist states in development and use

SIMS Lead Accepted By NOAA/Charleston

SIMS: Shellfish Information Management System



WHAT: Integrated database of shellfish water classification information with GIS functionality

WHY: Improve information sharing to promote shellfish safety, management, and habitat conservation

SIMS Applications

Track trends in growing water classifications, resources, and restoration

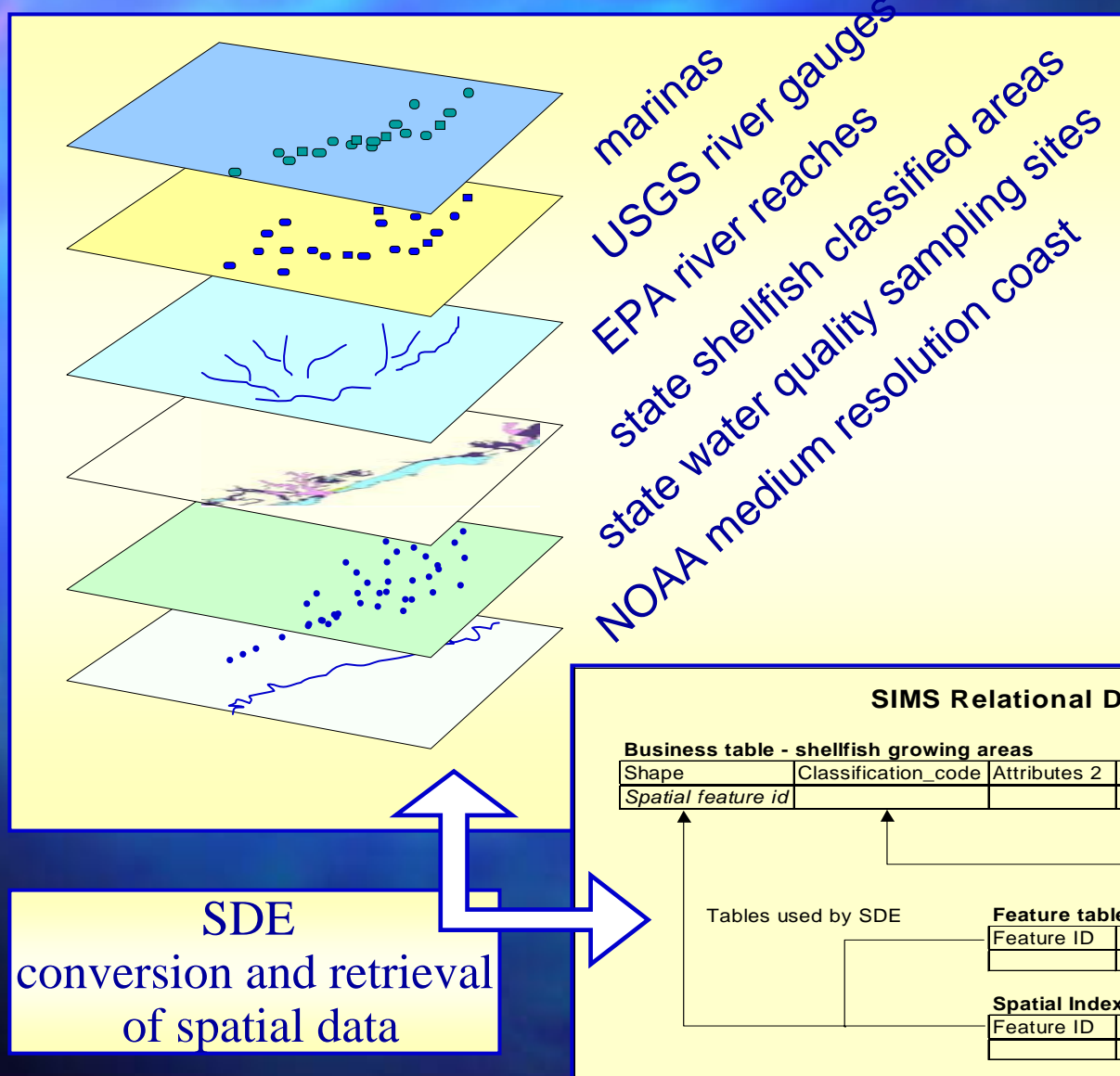
Model for states without data system/GIS for visualization, analysis and mapping

Link with other state and federal programs, data, and coastal activities

SIMS Approach and Development

- Workshops to assess user needs
- GIS/Spatial Data Engine/relational database model
- Web-based user interface
- Link to real-time gauge data
- Tools to access bacteria and rainfall data to help determine conditional closures

Multi-agency GIS data layers



SIMS data from state and federal partners

State Shellfish Program Information:

- Contact information

- Types of analyses

- GIS software / databases

Spatial Data on Growing Waters:

- Water quality monitoring stations

- Classified shellfish waters

- Locations of marinas

Additional Data Layers:

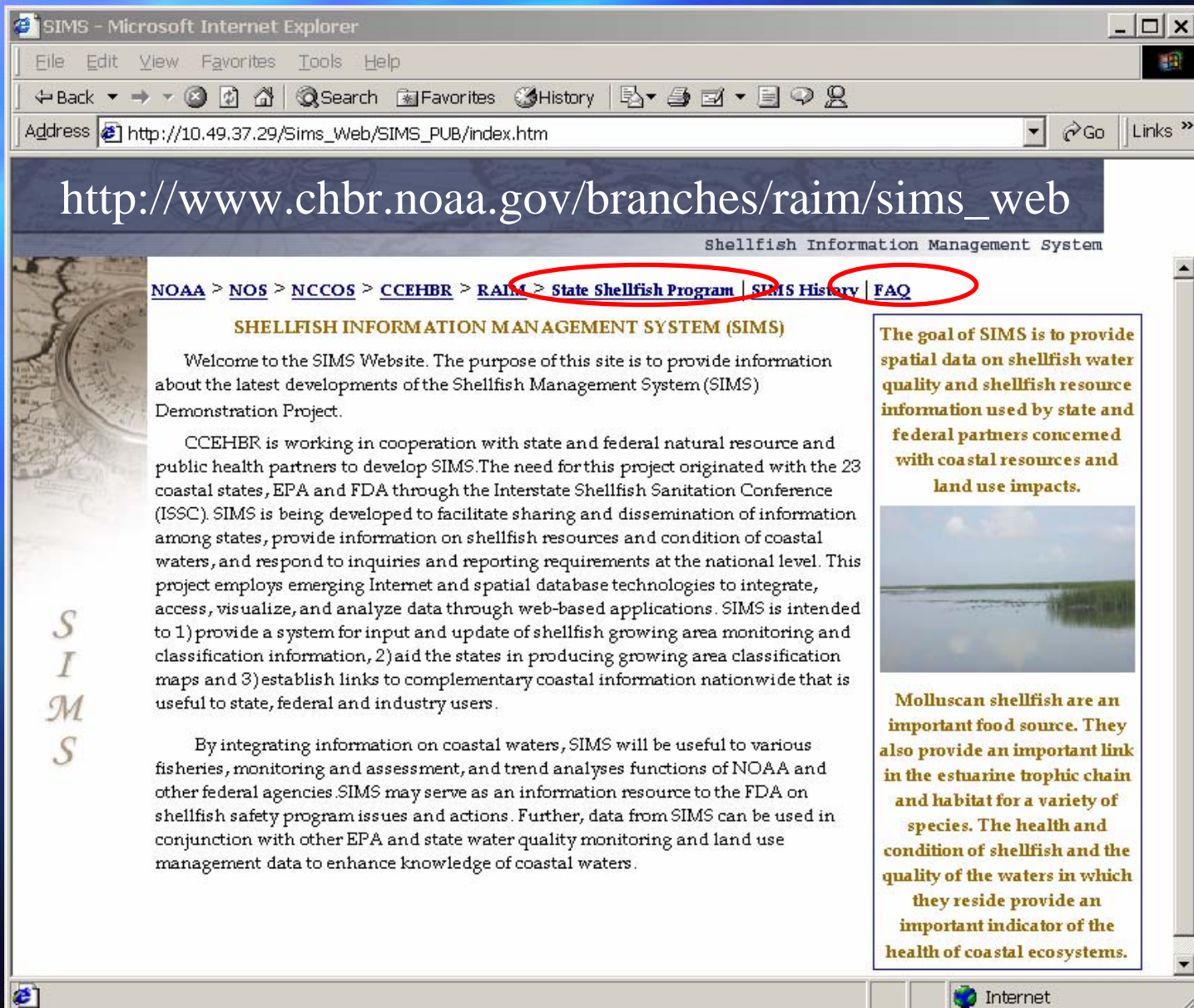
- NOAA medium resolution coastline

- NOAA coastal assessment framework

- USGS gauge stations

- EPA river reaches

SIMS homepage



SIMS information about state shellfish programs

SIMS - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites History Print Mail News RSS Feeds

Address http://205.156.31.24/Sims_Web/SIMS_PUB/index.htm Go Links »

Shellfish Information Management System

[NOAA](#) > [NOS](#) > [NCCOS](#) > [CCEHBR](#) > [RAIM](#) > [SIMS Home](#) > [State Shellfish Programs](#) | [SIMS History](#) | [SIMS FAQs](#)

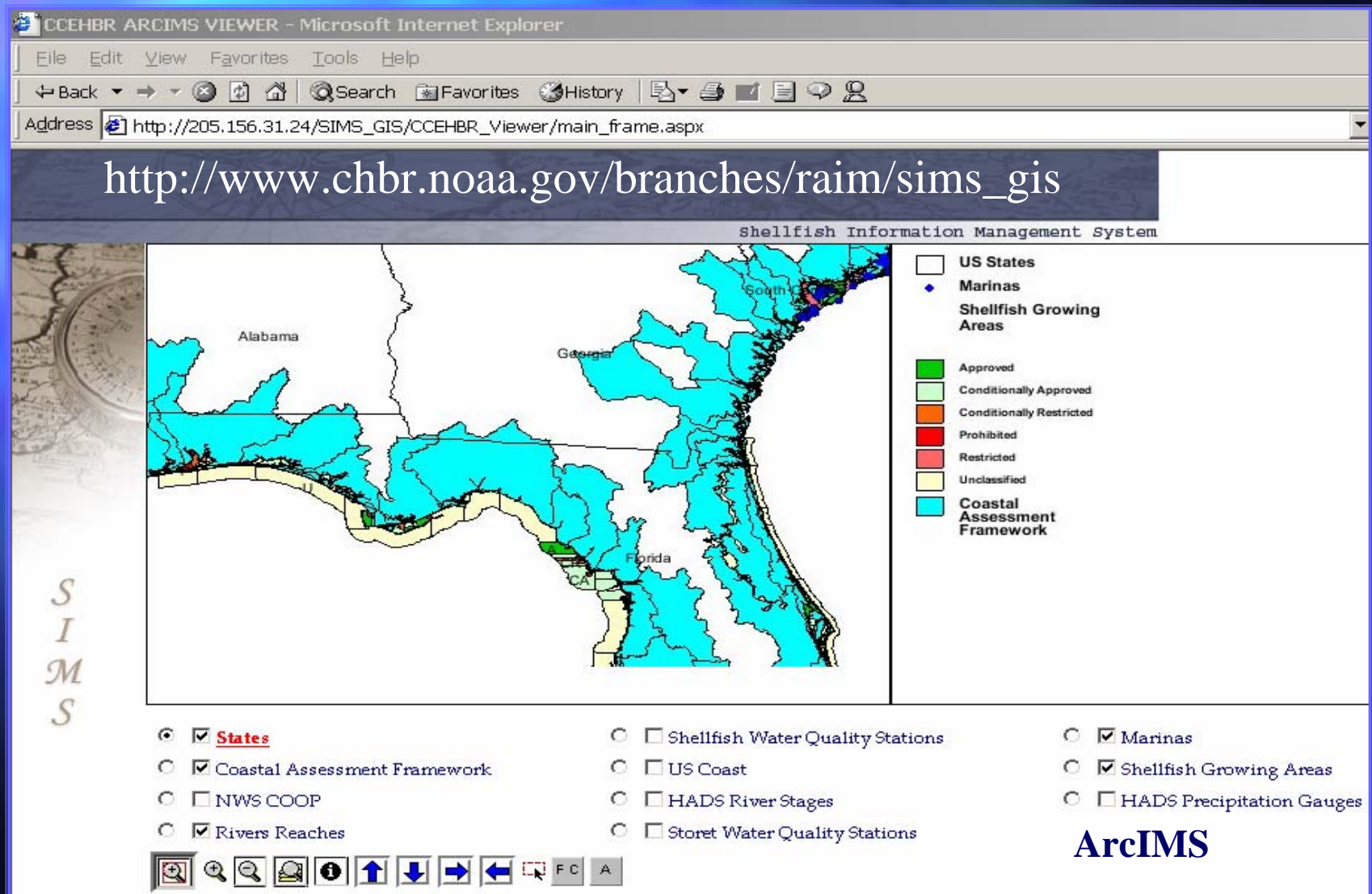
[Shellfish Programs](#)

	State	Shellfish Program Name
View	FL	Department of Agriculture and Consumer Services
View	La	Louisiana Molluscan Shellfish Program
View	MD	Maryland Department of the Environment
View	MS	Mississippi Department of Marine Resources
View	NJ	Department of Environmental Protection
View	SC	Department of Health and Environmental Control
View	TX	Texas Department of Health
View	WA	Department of Health

SIMS

Internet

GIS web interface to spatial database on shellfish areas and water quality



SIMS current status

June 2003

- Expandable model designed/implemented
- Spatial data from several states
- CAF, coast, rivers, USGS gauges, etc.
- Access thru web interface available
- Tools for FC statistics/rainfall/queries

SIMS Ongoing Work

Work with states to incorporate data

Improve and test interfaces and tools

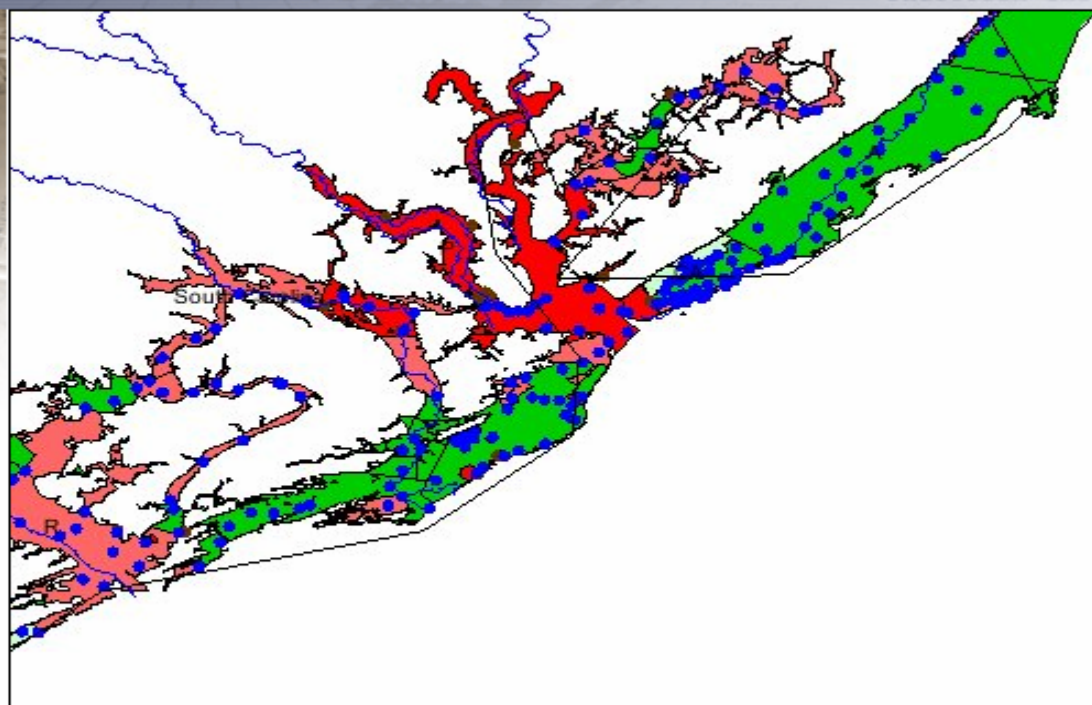
Address security and accessibility issues

Build linkages with EPA Storet, HABSOS,
and other relevant databases

Tools Active in SIMS

- Calculating acreage per classification type
- Running fecal coliform stats, using FC data provided to STORET data
- Extract a WQ station, shellfish layer, marina, or shellfish shapefile for a state
- Activate a URL for near-real time precipitation or river stage data

Shellfish Information Management System



Rivers Reaches

US States

Shellfish Water
Quality
Stations

Marinas

Shellfish
Growing Areas

Approved

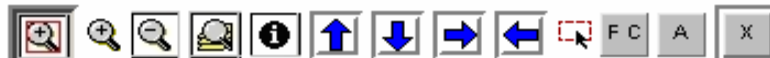
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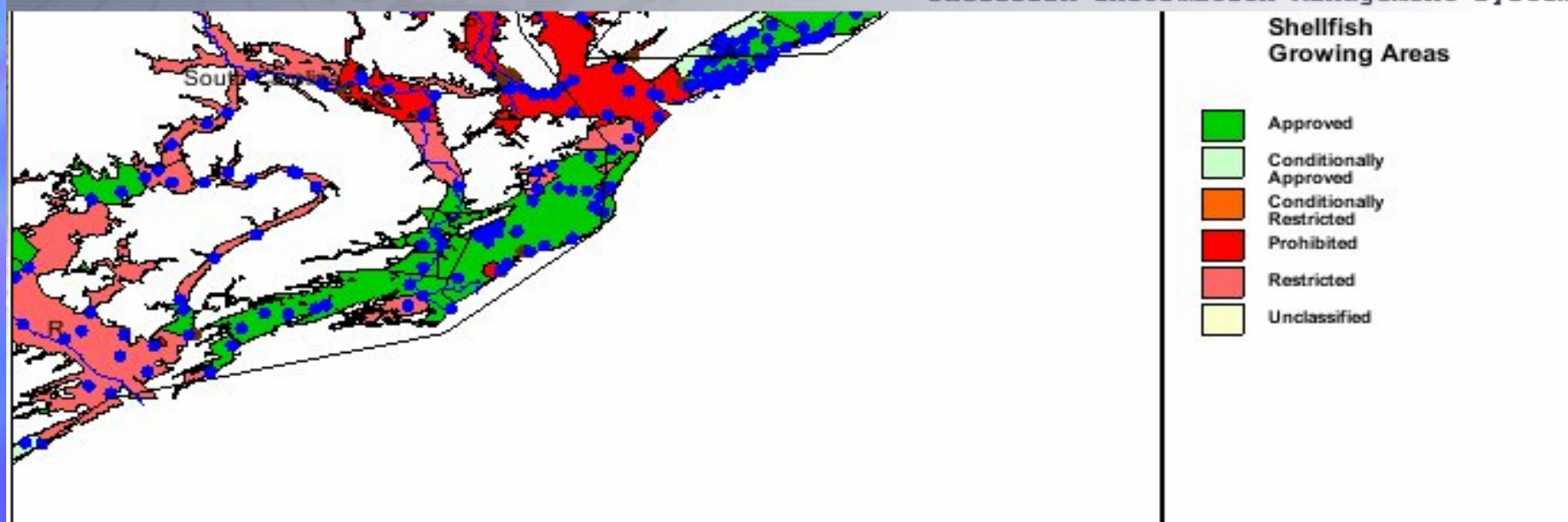
Prohibited

Restricted

Unclassified

Use a rectangle to select the area you want to zoom to

☒ States☐ Coastal Assessment Framework☐ NWS COOP☒ Rivers Reaches☒ Shellfish Water Quality Stations☐ US Coast☐ HADS River Stages☐ Storet Water Quality Stations☒ Marinas☒ Shellfish Growing Areas☐ HADS Precipitation Gauges☐ NOAA Shellfish Register

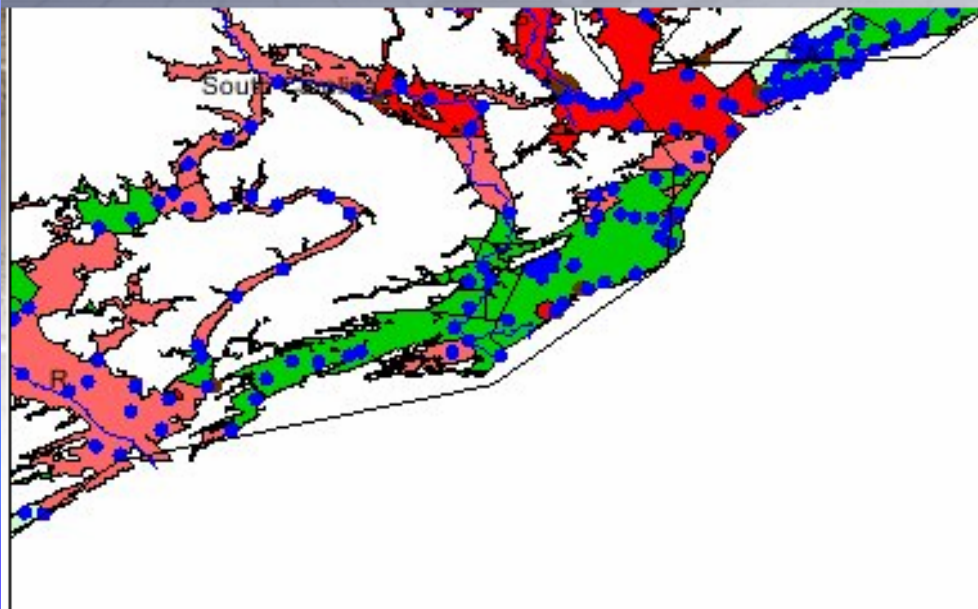


Click on a State to Calculate Shellfish Growing Areas Acreage.

- ☒ ☒ States
☐ ☒ Shellfish Water Quality Stations
 ☐ ☒ Marinas
- ☐ ☐ Coastal Assessment Framework
 ☐ ☐ US Coast
 ☐ ☒ Shellfish Growing Areas
- ☐ ☐ NWS COOP
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 ☐ ☐ NOAA Shellfish Register



Acreage	State_FIPS	State_Abbr	Program_Name	Program_Address	Program_City	Program_Sta
Calculate	45	SC	Shellfish Sanitation Program	South Carolina Dept. of Health and Environmental Control - 2600	Columbia	SC



Shellfish Growing Areas

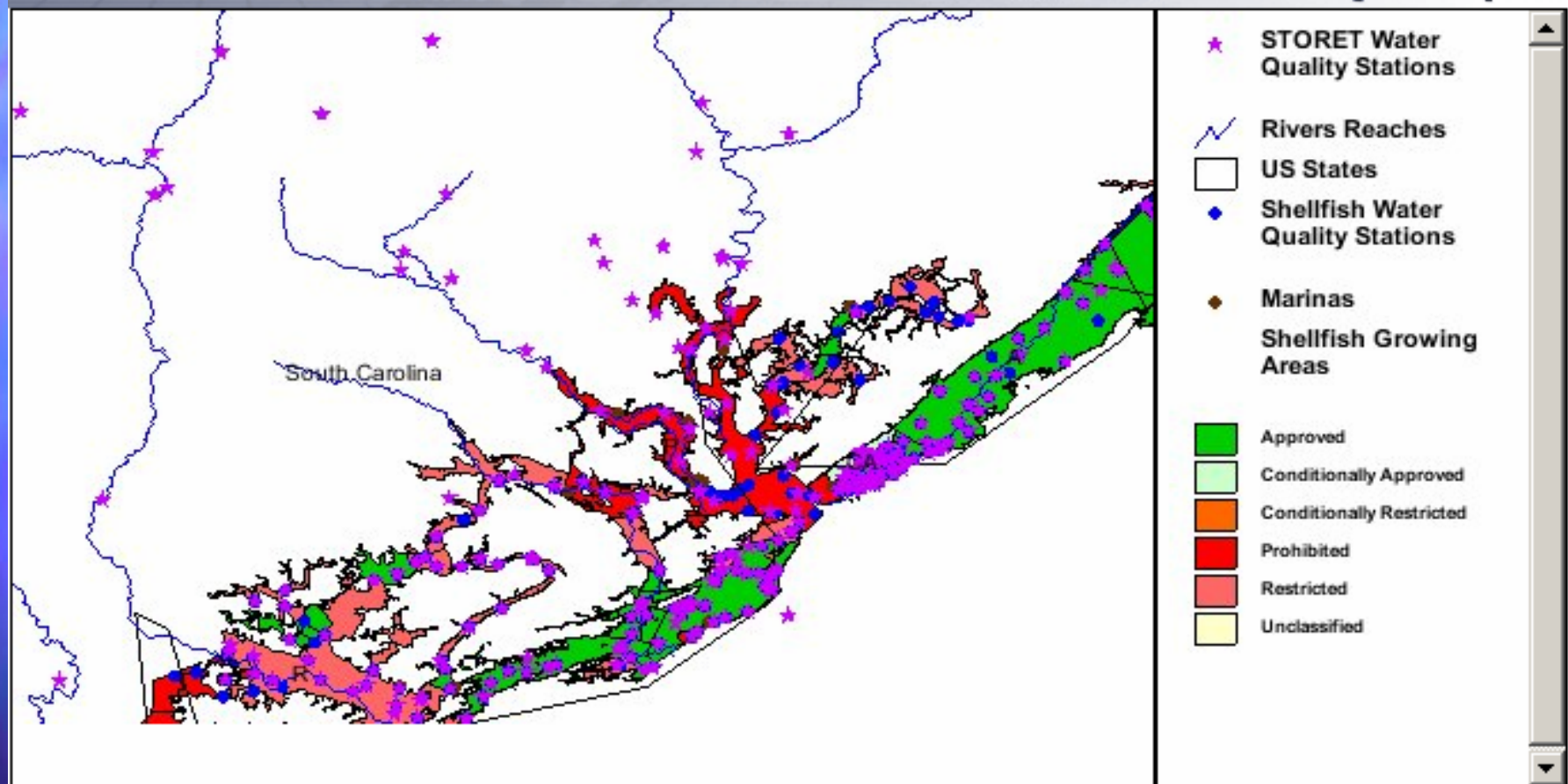
- Approved
- Conditionally Approved
- Conditionally Restricted
- Prohibited
- Restricted
- Unclassified

Click on a State to Calculate Shellfish Growing Areas Acreage.

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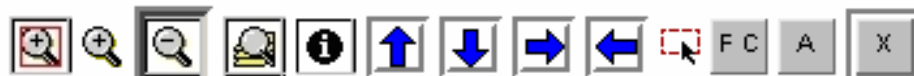


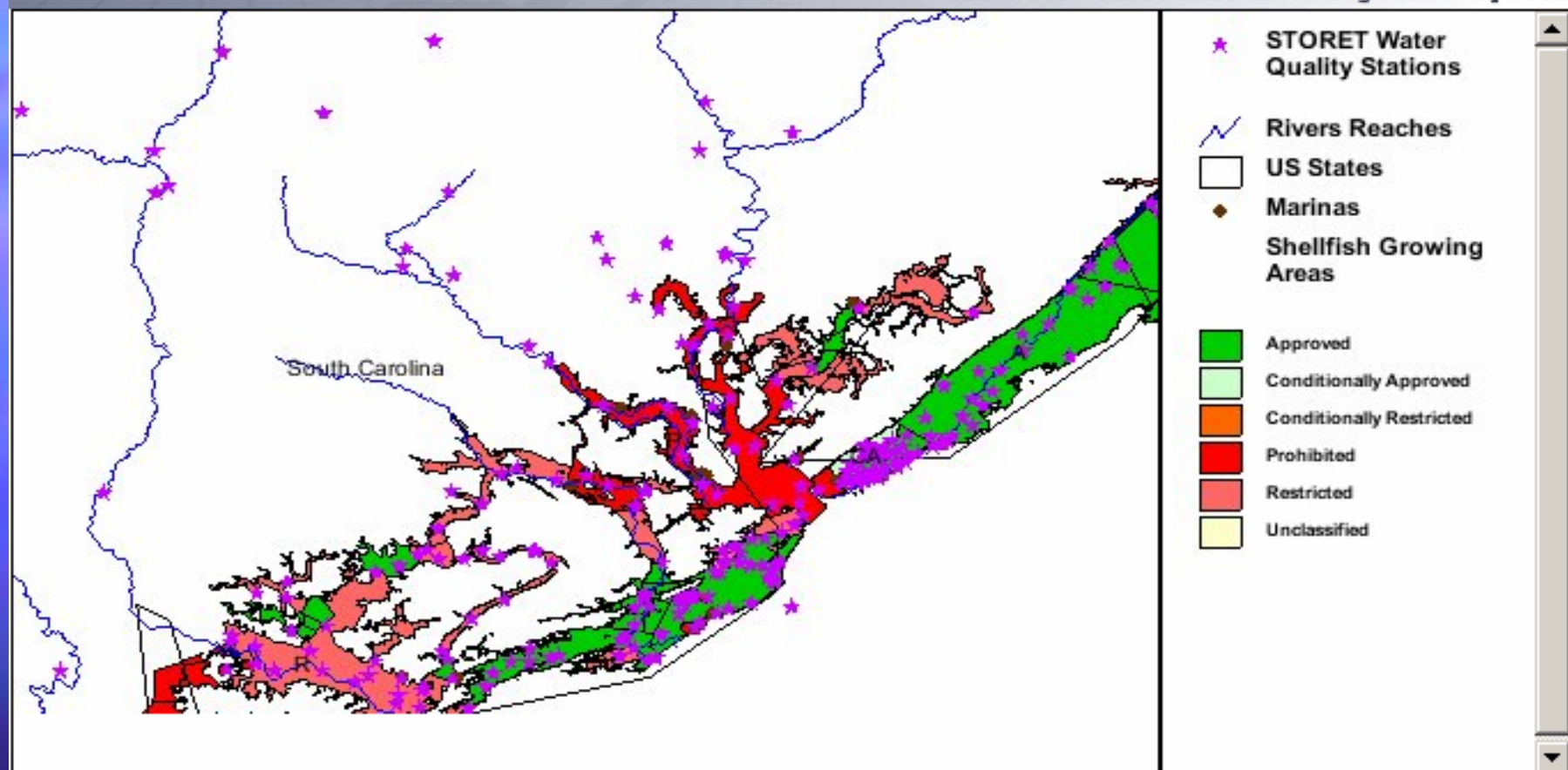
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Approved	258764
Conditionally Approved	4939
Prohibited	76353
Restricted	230607



Click on the area you want to zoom out from

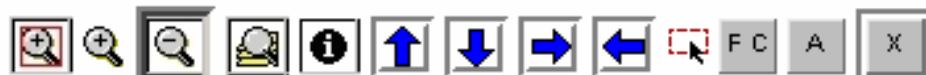
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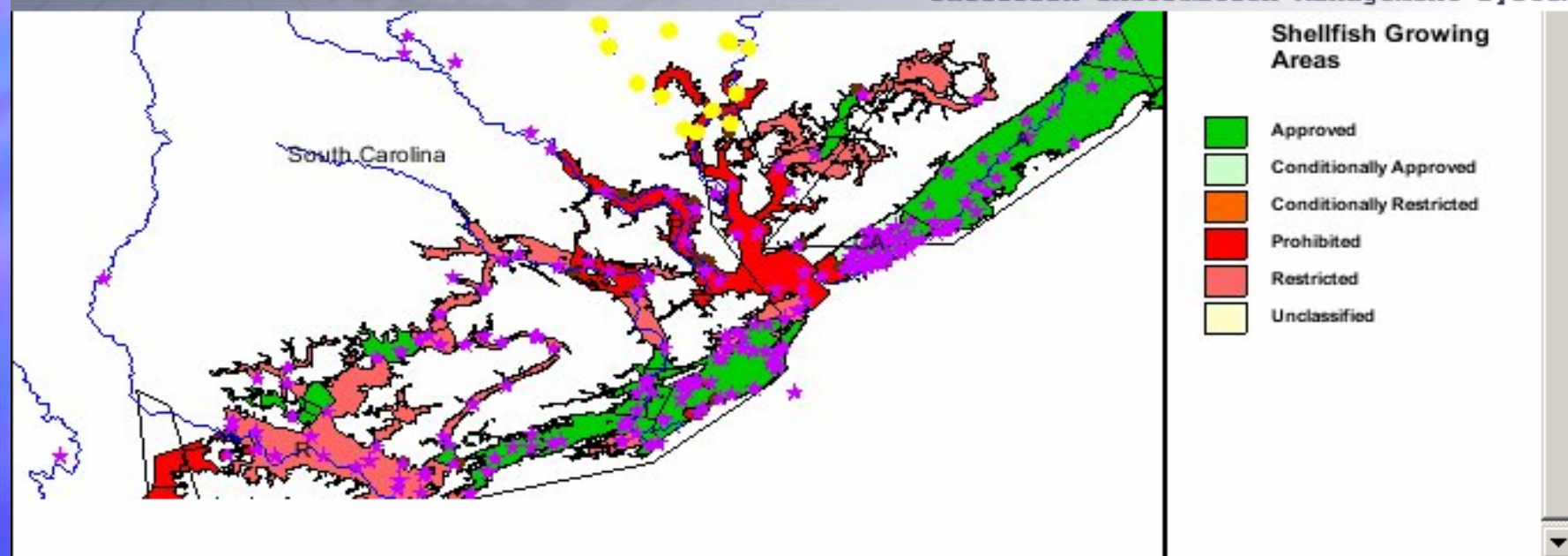




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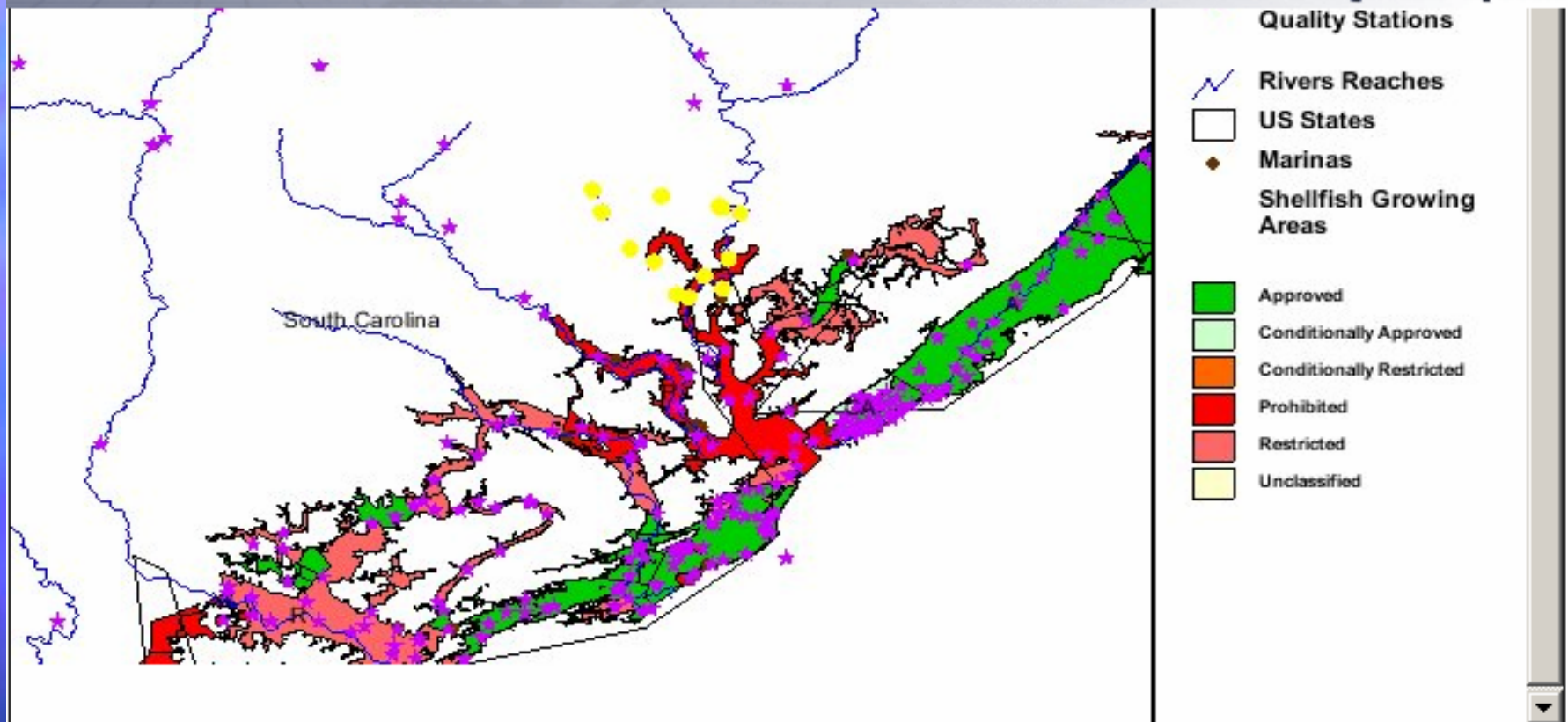


Select an Area from the map to view related features

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Fecal Coliform	ObjectID	Station Code	Station Name	Latitude	Longitude
Statistics	1137	CSTL-124	BACK RIVER RES IN FOREBAY EQUIDISTANT FROM DAM AND SHORELINE	32.96908	- 79.938655
Statistics	1407	MD-039	GOOSE CK 50 YDS BL HANAHAN OUTFALL	32.921055	- 79.991472



Select an Area from the map to view related features

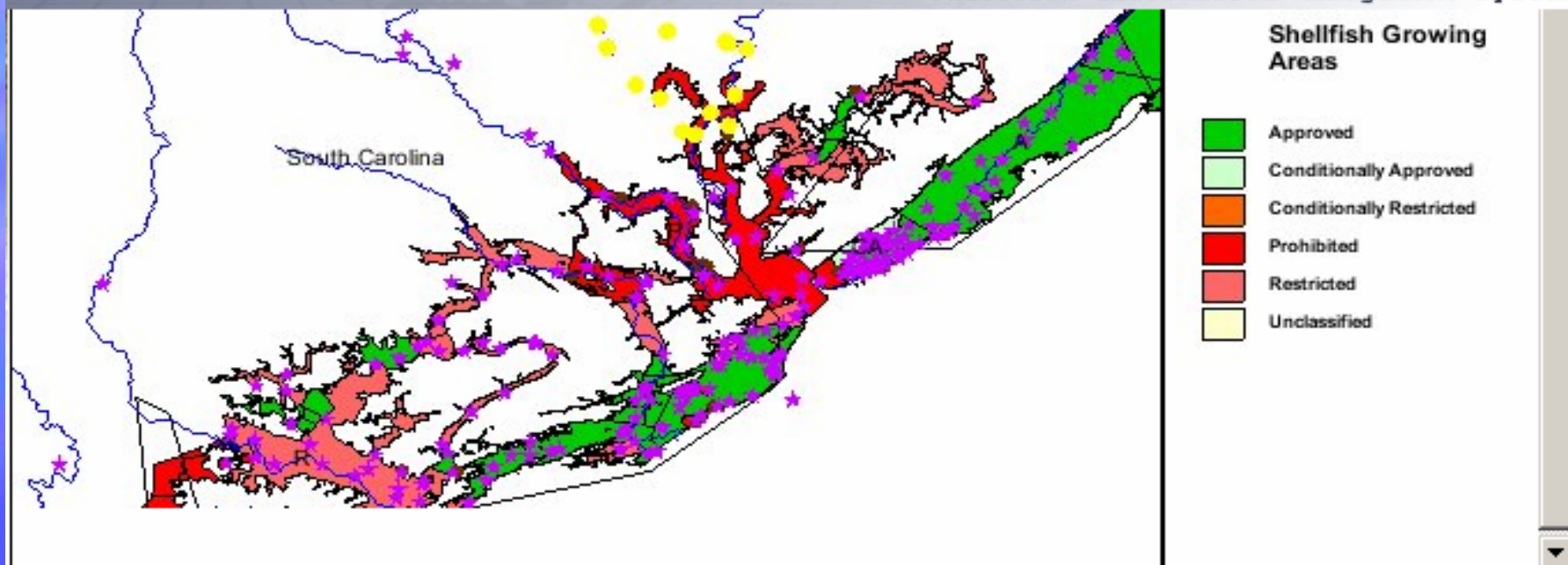
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| <input type="radio"/> <input checked="" type="checkbox"/> Rivers Reaches | <input checked="" type="radio"/> <input checked="" type="checkbox"/> <u>Store Water Quality Stations</u> | <input type="radio"/> <input type="checkbox"/> NOAA Shellfish Register |



Number of Samples

15

Run Fecal Colif Statistics

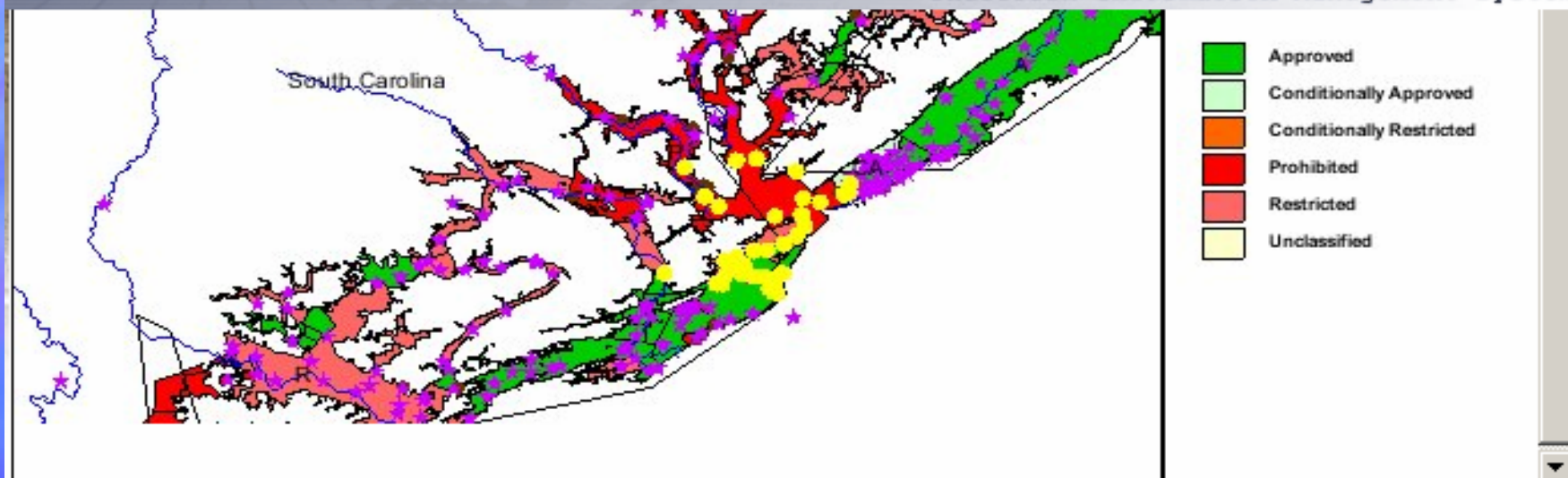


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Sample Count	Maximum	Minimum	% > 49	Median	Geometric Mean	Standard Deviation	90th Percentile	Program Name
7	100	2	14.29	20	13.78	0.59	78.43	Surface Water Quality Monitoring

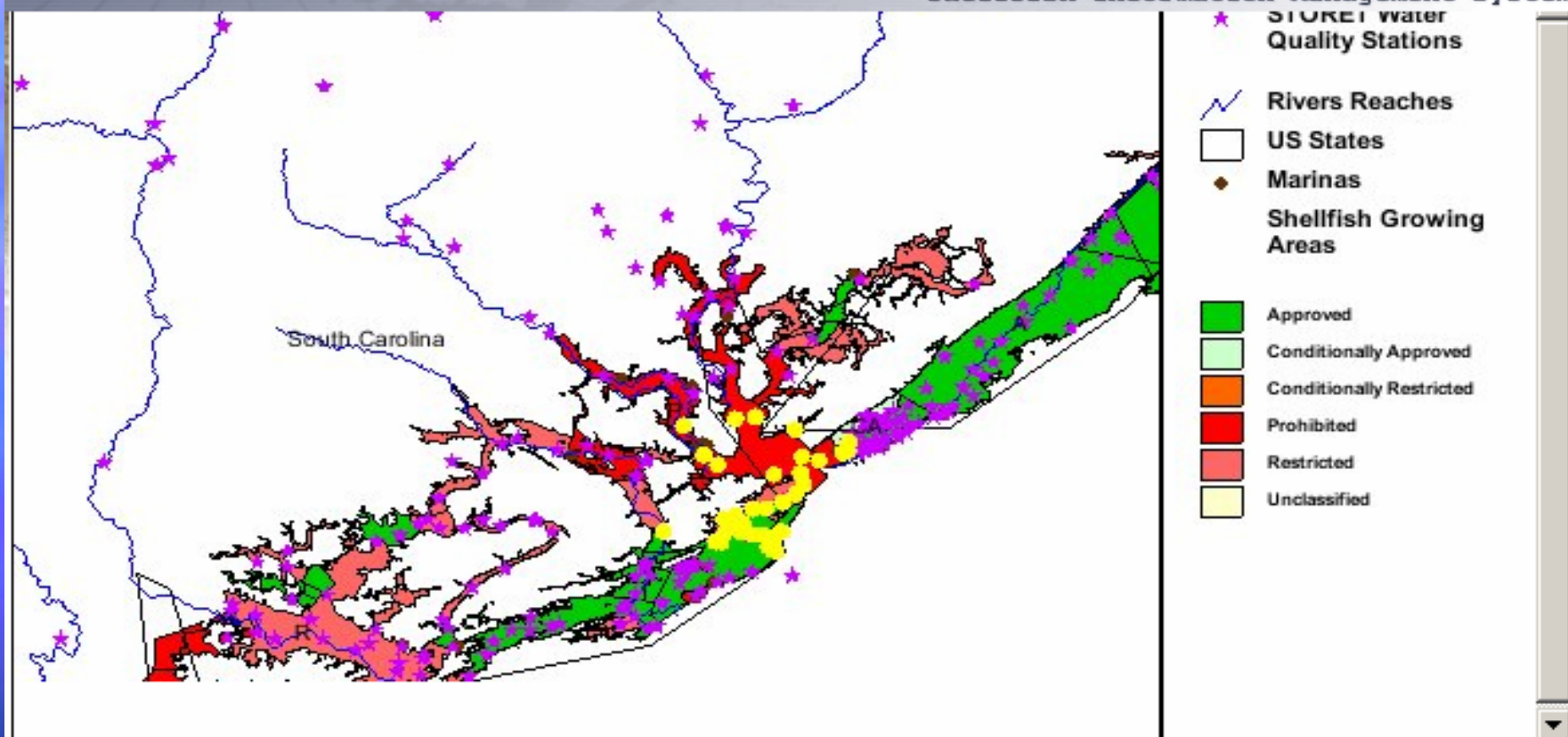


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Fecal Coliform	ObjectID	Station Code	Station Name	Latitude	Longitude
Statistics	203	09A-09	BEN SAWYER BRIDGE	32.7725	-79.842222
Statistics	204	09A-10	MARKER #126 - AIWW AT OLD PITT STREET BRIDGE	32.766112	-79.861667
Statistics	205	09A-17	CONCH CREEK STATE SHELLFISH GRND -	32.780000	-



Select an Area from the map to view related features

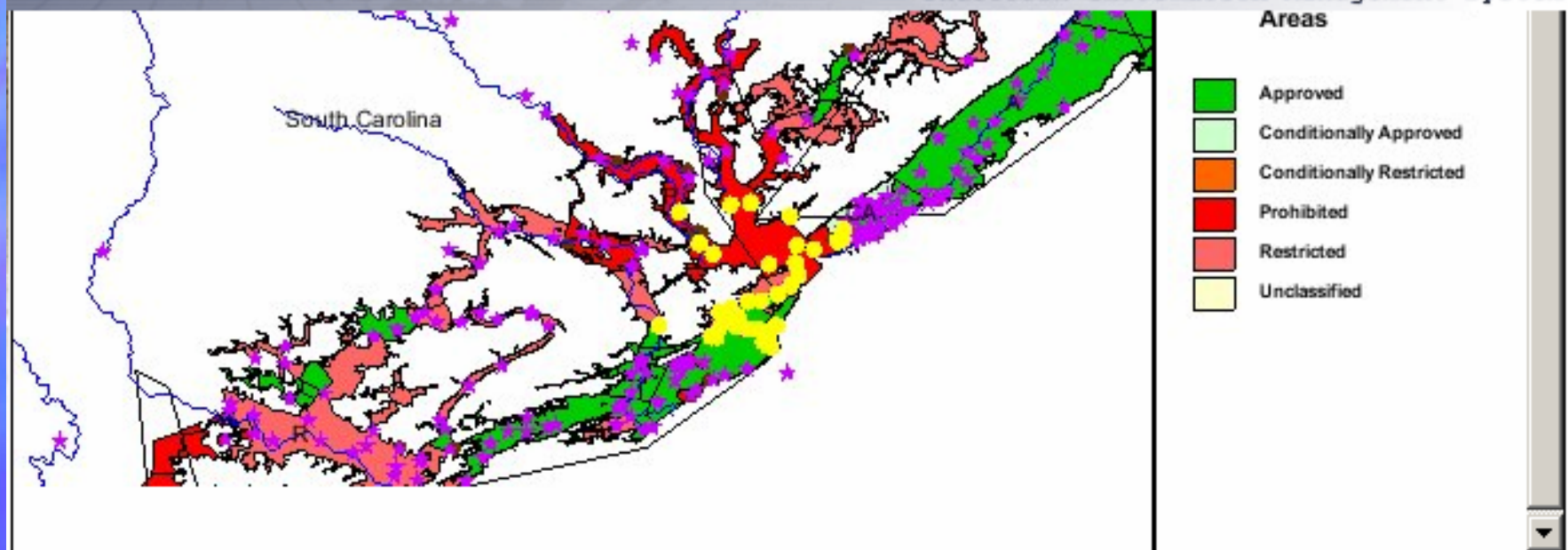
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 ☐ ☐ HADS Precipitation Gauges
- ☐ ☒ Rivers Reaches
 ☒ **Storet Water Quality Stations**
☐ ☐ NOAA Shellfish Register



Sample Count	Maximum	Minimum	% > 49	Median	Geometric Mean	Standard Deviation	90th Percentile	Program Name
12	49	1.9	0	13	12.86	0.42	44.35	Shellfish Sanitation Sampling

SIMS/EPA common issues

- Shellfish / water quality programs
- Assimilating spatial watershed-based data
- Modeling estuarine systems (TMDLs)
- STORET and SIMS data to manage shellfish areas
- Water quality data to target reductions in pollution impacting shellfish areas

FDA (NSSP) possibilities

Tool for regional specialists to improve communication with states

Map growing areas implicated in illnesses

Long term efficiencies and improvement of NSSP management

Next Steps

- ISSC meeting August 2-7
 - Update/planning with all coastal states
- SIMS operational October 1, 2003
- Incorporate state data & improve tools - 2004